Zentralblatt für Bakteriologie Mikrobiologie und Hygiene

International Journal of Microbiology and Hygiene

Abstracts

Medical Microbiology · Virology · Parasitology
Hygiene · Preventive Medicine

Editors: G. Henneberg, Berlin (West) · H. D. Brede, Frankfurt a. M.
H. Petri, Berlin (West)

In Cooperation with W. Bartocha, Berlin (West) · H. Brunner, Wuppertal
K. A. W. Gerber, Berlin (West) · H. Hussels, Berlin (West) · W. Köhler, Jena
H. Krauss, Gießen · G. Linzenmeier, Essen · R. Lütticken, Köln
H. Mochmann, Berlin-Buch · G. Peters, Köln · H. Raettig, Berlin (West)
A. Rodloff, Berlin (West) · G. Schallehn, Bonn · R. Sonak, Münster
G. Spicher, Berlin (West) · F. Staib, Berlin (West) · G. Steidten, Berlin (West)
H. Stolp, Bayreuth · H. Werner, Berlin (West)

Volume 289

Gustav Fischer Verlag · Stuttgart · New York · 1985

ISSN 0177-3100

© Gustav Fischer Verlag, Stuttgart/New York 1985
Alle Rechte vorbehalten
Druck: Karl Grammlich, Pliezhausen
Printed in Germany

CONTENTS

General Medical Microbiology 97-153, 289-291, 369-392

History, Epidemiology, Communicable Diseases (Legislation) 289-291

History 289
Epidemics 289
Epidemiology, Geomedicine
Meetings 289-291
Communicable Diseases, Legislation and Statistics

Biology of Microorganisms 97-139

Taxonomy, Classification, Description of Bacteria 97-101
Morphology, Ultrastructure, Chemical Composition, Function 101-102
Nuclear Region
Ribosomes
Cytoplasmic Membrane
Cell Envelope: Cell Wall, Outer Membrane Structures 101-102
Flagella 102
Endospores 102
Protoplasts, Spheroplasts, L-Forms
Other Cell Structures 102
Physiology 102-108
General Physiology 102-105
Nutrition, Transport 105-106
Growth 106
Bacterial Adhesion, Colonization 106-107
Antimicrobial Effects 107-108
Drug Resistance 108
Metabolism 108-124
Energy Metabolism: Electron Transfer, Respiration, Fermentation
Pathways, Transformations 110-111
Metabolism and Biosynthesis of
Proteins, Peptides, Amino Acids, Other Organic N-Compounds 111-113
Nucleic Acids, Nucleotides, Nucleosides, Purine and Pyrimidine Bases 113
Carbohydrates, Polysaccharides, Lipopolysaccharides 113
Lipids, Glycolipids, Lipoproteins, Fatty Acids 114
Mureine, Cell Wall Constituents 114-115
Other Compounds 115
Enzymes and their Regulation 115-119
Mineral Metabolism 119
Chemolithotrophic, Methylotrophic, Methanogenetic, Phototrophic Microorganisms 119-121
Microbial Products incl. Antibiotics and Toxins 121-124
N_2-Fixation 124

Genetics and Molecular Biology	124-136
General, Biochemical Genetics	124-127
Cloning, Genetic Engineering	127-129
Mutations	129-130
Gene Transfer	130-131
Plasmids	131-135
Bacterial Viruses	135-136
Bacteriocins	136
Applied Microbiology and Biotechnology	136-138
Industrial Processes and Products	136-138
Food Microbiology	138
Biodeterioration	
Microbial Ecology	138-139
General	138
Habitats, Dispersal, Interactions	138-139
Microbial Interactions	
Methods in Microbiology	140-148
Physical Methods	140
Chemical Methods	140-141
Analytical Methods	140
Stains	141
Electron Microscopy	
Culture Media	141-142
Isolation, Cultivation	142-143
Diagnosis, Identification	143-146
Serological Methods	146-147
Susceptibility Testing	147-148
Methods of Preservation	
Cell Culture	
Laboratory Animals, Animal Experiments	148
Disinfection, Sterilization, Pest Control	149-153
Disinfection	149-153
Pasteurization and Preservation	
Sterilization	
Inactivation and Reactivation of Microorganisms: Other Information	153
Pest Control	
Chemotherapeutics and Chemotherapy	369-392
General, Methods of Evaluation	369-373
Chemotherapeutics	373-384
Synthetic Substances	373-376
β-Lactam-Antibiotics	376-380
Other Antibiotics	380-384
Chemotherapy	384-392
Immunity and Blood-group Research	1-53, 393-448
Immunology	1-53, 393-448
Laboratory Techniques	1-4, 393-395
General Immunology	4-9, 395-398
Cellular Immunology	9-16, 398-403
Antigens (Immunogens)	16-18, 403-409

Incomplete Antigens 409-411
Antibodies, Immunoglobulins 18-24, 411-418
Structure and Function 411-413
Antibody Production 413-414
Immune Deficiency 414-415
Monoclonal Antibodies 24-25, 415-417
AIDS (= Acquired Immunodeficiency Syndrom) 25-28, 417-418
Complement, Conglutinin, Properdin, Stimulin 29-30, 418-420
Interferon 30-31, 420-421
Immune Complexes 421-423
Antigen-Antibody Reactions and Complexes 31-32
Hypersensitivity, Immediate, Delayed, Allergens 32-34, 423-425
Allergens 425-427
Anaphylaxis 34-36, 427
Immunochemistry, Neuraminidase, Adjuvants 36-38, 428-431
Immune Modulators 38-40, 431-434
Interleukin
Toxins 434-435
Endotoxins 435-436
Suppression of the Immune Response 40-42, 436-439
Serology of Infectious Diseases 42-44, 439-440
Serology of Non-infectious Diseases 44
Serology of Chronic Polyarthritis 440-441
Autoimmune Diseases 44-45, 441
Tumor Immunology 45-47
Transplantation-Immunology 47-50, 441-444
Immune Tolerance
Vaccines and Sera 50-51, 444-445
Applied Immunology 52-53, 445-446
Effects of Radiation on Immunological Reactions 446-447
Immunogenetics 53, 447-448
Miscellaneous, Unspecific Defense Mechanisms

Blood and Blood-group Serology

Blood, Serum Proteins, Serum Groups
Blood-groups (Erythrocyte-Determinants)
Blood-group Serology
Bloodtransfusions

Special Medical Microbiology, Including Communicable Diseases and their Control, Special Immunotherapy and Chemotherapy 54-82, 154-175, 193-247, 292-321, 449-511

Bacteriology

Micrococcaceae
Micrococcus
Staphylococcus

Streptococcaceae 154-175
Streptococcus (incl. S. pneumoniae) 154-175

Peptococcaceae
Peptococcus
Peptostreptococcus
Sarcina

Neisseriaceae	292-301,449-458
Neisseria	
Neisseria gonorrhoeae	292-296,449-453
Neisseria meningitidis	296-300,453-458
Kingella	458
Acinetobacter	300
Moraxella	
Branhamella	300-301
Other Neisseriaceae	
Veillonellaceae	
Lactobacillaceae	301-302,458
Lactobacillus	
Listeria	301-302,458
Erysipelothrix	302,458
Enterobacteriaceae	
Escherichia	
Edwardsiella	
Citrobacter	
Salmonella	
Shigella	
Klebsiella	
Enterobacter	
Hafnia	
Serratia	
Proteus	
Yersinia	
Erwinia	
Other Enterobacteriaceae	
Pseudomonadaceae	
Pseudomonas and Related Species	
Vibrionaceae	303-306
Vibrio	303-304
Cholera	304-306
Aeromonas	306
Spirillaceae	
Campylobacter	
Gram-negative, Aerobic, Facult. Anaerobic and Anaerobic Rods	307-321
Alcaligenes	
Acetobacter	
Brucella	307-308
Bordetella	308-310
Francisella	310
Haemophilus	310-313
Actinobacillus	313
Agrobacterium	313
Pasteurella	313-315
Legionella	315-318
Cardiobacterium	
Kingella	
Gardnerella	
Selenomonas	

Streptobacillus
Bacteroides 318-320
Flavobacterium
Fusobacterium 320
Eikenella 320-321
Veillonella 321
Mobiluncus 321
Capnocytophaga
Rhodospirillaceae

Bacillaceae 459-466
Bacillus 459-460
B. anthracis 459-460
Clostridium 460-466
C. botulinum 460-461
C. difficile 461-463
C. perfringens 463-465
C. tetani 465-466
Clostridium sp.

Corynebacteriaceae
Corynebacterium
C. diphtheriae
Arthrobacter

Propionibacteriaceae
Propionibacterium
Eubacterium

Actinomycetales 193-203,467-473

Actinomycetaceae 193-194,467
Actinomyces (Actinomycose) 193
Bifidobacterium 193-194

Mycobacteriaceae 194-202,467-493
Mycobacterium
General Features
Infective Agents of Mammalian Tuberculosis
Mycobacterium tuberculosis 194,467-468
Mycobacterium bovis, BCG 468-469
Tuberculosis 194-197,469-470
Pathology
Immunology, BCG 194-195
Diagnostic Procedures 195-196
Chemotherapy 196-197
Epidemiology 197

Atypical Mycobacteria 197-198,470-472
General Features
Runyon Group I Photochromogenic M.
Runyon Group II Scotochromogenic M.
Runyon Group III Nonchromogenic M.
Runyon Group IV Rapidly Growing M.
Uncertain Affiliation

Mycobacterium leprae 198-201,472
Leprosy 472-473
Mycobacterium lepraemurium 201,473
Mycobacterium ulcerans 201-202

Mycobacterium paratuberculosis
Nocardiaceae 202
Streptomycetaceae 202-203
Other Actinomycetales

Spirochaetales 204-208,474,483
Spirochaetaceae 204-206,474-479
Spirochaeta 204-205
Treponema 205,474-475
Syphilis 205-206
Lues 475-477
Borrelia 477-479
Leptospiraceae 206-208,479-483
Leptospira 206-208,479-483

Helical/Vibrioid Gram-Negative Bacteria
Vibrioide 209-212,484
Spirillum
Campylobacter 209-212,484
Bdellovibrio 212

Mycoplasmatales
Mycoplasmataceae
Mycoplasma
Ureaplasma
Acholeplasmataceae
Acholeplasma
Other Mycoplasmatales

Rickettsiales 485-493
Rickettsiae 485-489
Rickettsia 485-488
Coxiella 488-489
Ehrlichia

Bartonellaceae
Bartonella

Chlamydiales 489-493
Chlamydia 489-493
Trachomatis
Psittaci

Virology 54-82
213-247,494-511
General 54-56
213-214,494-495
Poxviridae 56,214-215,495
Herpesviridae 56-61
215-222,495-498
Adenoviridae 61,222-223,498-499
Papovaviridae 61-62,223-225,499
Parvoviridae 499
Orthomyxoviridae 62-64
225-228,500-501
Paramyxoviridae 64-66,228-230,501

Rhabdoviridae 66-67,231, 501
Retroviridae 67-69
231-233,501-503
Reoviridae 69-70,233-236,503
Togaviridae 70-72
236-238,503-507
Picornaviridae 72-78
238-243,507-509
Coronaviridae 78,243,509
Arenaviridae 78-79,509
Bunyaviridae
Hepatitis 79-82
243-246,509-510
Slow Virus Infections 246-247
Other Viruses of Medical Interest 82,247,511
Phages
Insect and Plant Viruses

Mycology

General Mycology
Special Mycology
Dermatophytes, Dermatomycoses
Yeast-like Fungi, Candidamycoses
Candidamycoses, Candida-Immunology
Algae, Prototheca, Protothecosis
Cryptococcus, Filobasidiella, Cryptococcosis
Dimorphic Fungi, Systemic Mycoses
Aspergillus, Aspergillosis, Moniliales
Mycotoxins
Dematiaceae, Chromoblastomycosis,
Phaeohyphomycosis
Zygomycetes, Zygomycoses
Therapy of Mycoses, Antimycotics

Medical Parasitology 248-266,322-338

Parasitology, General

Protozoa 248-262,322-332
Mastigophora (Flagellata) 248-252,322-326
Leishmania 248-250
Trypanosoma 251-252,322-324
Trichomonas 324
Giardia 325-326
Rhizopoda 252-254,326-327
Amoebina 252-254,326-327
Sporozoa 254-262,327-331
Coccidia 254
Toxoplasma 254-255,327-329
Sarcosporidia 255
Cryptosporidia 256-257
Haemosporidia 257-262,329-331
Other Protozoa 262,331-332
Theileria, Babesia, Piroplasma 331-332
Anaplasma
Pneumocystis 262
Ciliata

Helminthes	262-265, 332-338
General	
Trematoda	262-263, 332-336
Schistosoma	332-336
Fasciola	262-263
Trematoda etc.	263
Cestoda	336-337
Taenia	336
Echinococcus	337
Nematoda	263-265, 337-338
Trichinella	337-338
Ascaris	338
Ancylostoma	338
Strongyloidae	338
Filaroidae	263-265
Toxocara	
Other Nematoda	265
Other Helminths	
Arthropoda	265-266
Arachnoidea	
Insecta	
Insecticides	
Nematocera	
Other Arthropods	
Other Animals of Medical-parasitological Importance	
Infections and Infectious Diseases, Special Topics	83-87
Infections	83-84
Infections, Special Topics	84-86
Bacterial Flora	86-87
Environmental Hygiene	88-93, 176-189, 267-288, 339-363, 512-527
Environment, General, Ecohygiene, Xenobiotics, Pests and Pesticides, Toxicology of Special Chemicals	176-185, 339-349, 512-527
Environmental Hygiene, General	339
Environmental Planning	
Environmental Exposure, Ecotoxicity, General	176-177, 339-340, 512
Xenobiotics, General	178, 340, 512-513
Pests and Pesticides	178-181, 340-344, 513-515
Toxicology of Special Chemicals	181-185, 344-349, 515-527
Environment Protection	
Legislation, Guidelines	
Air, Soil, Drinking Water and Industrial Water, Food, Pesticide Residues, Consumer Products	267-282
Air	267-270
General	
Weather and Climate	

Bioclimatology and Medical Meteorology
Air Pollution 267-270
Air Examination 270
Effects
Legislation, Guidelines

Soil 270-272
General
Structure, Chemistry
Microbiology, Fauna, Flora
Soil Contamination
Soil Examination
Legislation, Guidelines

Drinking Water and Industrial Water 272-275
General 272
Water Resources
Water Economy
Water Requirements and Water Consumption
Water Constituents 272-273
Water Catchment
Raw Water
Protective Zones
Drinking Water Treatment and Disinfection
Water Distribution
Water Examination 273-275
Water-borne Diseases
Legislation, Guidelines

Food, Pesticide Residues, Consumer Products 275-282
General 275
Food Requirements 275
Food Production
Vitamins
Nutritive Value
Packaging
Food Preservation, Food Additives 275-277
Catering
Food Examination 277-278
Injuries Caused by Malnutrition 278-280
Food Poisonings 280
Food Infections 280-281
Pesticide Residues 281-282
Stimulants 282
Consumer Products
Legislation, Guidelines

Housing Hygiene and Community Hygiene, Hygiene of Public Facilities, Hygiene of Bathing and Swimming 88-89, 186-189

General
Town Planning
Traffic, Road Design
Housing Hygiene 88, 186
Community Hygiene, General
Hospital Design and Hygiene, Hospital-associated Infections 88-89, 186-187
School Design and Hygiene 187-188
Kindergartens, Playgrounds
Sport Facilities, Camping, Caravaning

Balneology, Spas 188
Design and Construction of Baths
Swimming-bath Water, Examination, Treatment, Disinfection 89, 188
Swimming-bath Hygiene and Communicable Diseases 89, 188-189
Sauna, Solarium Facilities 189
Legislation, Guidelines

Quality of Waters, Liquid and Solid Wastes 90-93, 350-363

General
Quality of Surface Waters 350-351
Water Pollutants 351-355
Pollution Control of Surface Waters
Liquid Wastes, Sewage 355-357
Domestic and Communal Sewage, Industrial Wastes
Hospital Wastes
Sewage Treatment 357-359
Sewage Sludge 90, 360-361
Utilization of Sewage and Sewage Sludge 90, 361-362
Examination of Liquid and Solid Wastes
Solid Wastes 90-91
Domestic Refuse, Industrial Wastes
Wastes from Hospitals and Medical Practice
Utilization of Wastes (Recycling) 91-92
Compost 92, 363
Waste-associated Health Risks
Legislation, Guidelines 92-93

Industrial Hygiene 283-288

General
Physiology
Industrial Hygiene
Hazardous Materials and Other Dangerous Influences 283-288
Occupational Diseases
Legislation, Guidelines

Public Health, Personal Hygiene 364-365

Public Health Services, Public Hygiene, Public Health, Personal Hygiene, Recreation 364-365

General
Public Health Services, General
Special Problems of Public Hygiene 364
Hygiene in Handling of Corpses, Burial and Cremation
Health Statistics
Epidemiology of Non-communicable Diseases 364-365
Noise, Stress
Poisonings
Welfare, Preventive Health Care and Health Education
Perinatal Medicine

Population
Personal Hygiene, Clothing 365
Recreation, Leisure Time, Sport, Tourism
Legislation, Guidelines

Book Reviews 94-96
190-192, 366-368, 528